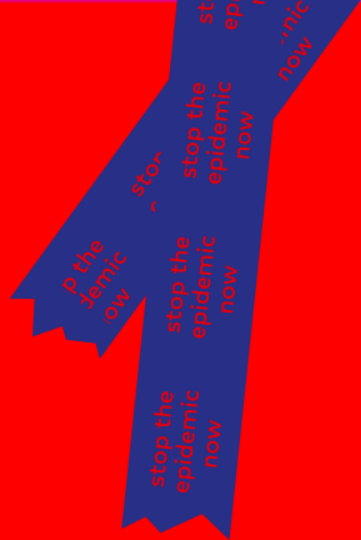


 **aidsfonds**



# Scientific Update

## IAS Paris

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# Treatment as prevention

**Partner study 2016 Durban** update: 888 serodiscordant couples, no linked HIV-infections

'The chance of an HIV-positive person with an undetectable viral load transmitting their virus is very low and quite possibly zero'

**Opposite Attrack study:** 343 serodiscordant gay couples: ZERO HIV- transmissions when undetectable viral load

## **U= U statement: Undetected = Uninfectious**

the risk of HIV transmission from a person living with HIV (PLHIV), who is on Antiretroviral Therapy (ART) and has achieved an **undetectable viral load** in their blood for **at least 6 months** is negligible to non-existent. While HIV is not always transmitted even with a detectable viral load, when the partner with HIV has an undetectable viral load this both protects their own health and prevents new HIV infections.

(Negligible is defined as: *so small or unimportant as to be not worth considering; insignificant.*)

# Treatment & prevention methods

**WHY?** Treatment is needed for 37 million people **FOR LIFE!** Simpler / Safer (toxicity and resistance)/ Cheaper

## **New medication:**

- Doravirin: well tolerated, high resistance barrier (phase 3 trial) (expected on market in 2018)

## **Improved use of existing medication :**

- Lower dose: ENCORE study Efavirenz 600mg → 400mg (give 600 in pregnancy or TB)
- Change pill-rate: 'Short – cycle treatment:'(SCT) s a potential quality of life improving option for adherent people suppressed on ART
  - 5 days pills/ 2 day break. BREATHER study adolescents
- Duo- therapy: e.g. darunavir/rilpivirin SWORD study (filled for regulatory submission)

## **New delivery models**

- Injectables: 96-week LATTE-2 study : every 4 or 8 weeks injection with ART "maintance" therapy  
Cabotegravir plus rilpivirin → good viral suppression! Next step = phase 3 trial

# Prevention: toolbox is getting bigger!

## **New medication:**

- HPTN 077 : Cabotegravir as long acting for PrEP : safety and acceptibility → Now efficacy trial  
(rilpivirin does not work)

## **Additional use of existing medication:**

- On demand PrEP works: IPERGAY Study: use of PrEP for MSM with less frequent seks.

## **New delivery models**

- Injectables
- Vaginal ring: Dapivirine ring in *adolescence*: safety and acceptibility (and adherence)→ larger trial planned



"HIV doesn't distinguish between a 16-year-old and an 18-year-old. Access to safe and effective HIV prevention shouldn't either."

It gave me freedom inside my heart  
and I saw that eeh at  
least here I have started to be like a  
normal person.  
(Uganda, SCT)

I don't know what it is  
about those two days, but  
it's the  
best days ever  
(US, SCT)

BREATHER

Just like birthcontrol  
methods!  
MdJ

## Treatment and Prevention methods:

**One size does not fit all! →  
need for individual approach**

How to implement?

How to ensure access?

Risk for resistance?

How about the reservoirs?

Appropriate for Resource Limited  
Settings with less frequent viral load  
monitoring?

# A vaccin and cure, please! Are we there yet?

## **Vaccin:**

**Durban 2016:** HTPN 702 'Efficacy' Trail starting based on 'Thai-vaccin'  
~5000 people, South Africa. Results expected 2020

## **Paris 2017:**

APPROACH study: A Phase 1/2a vaccine : safety & good antibody response  
→announcement of efficacy trial start HTVP705:

600 sexually active women aged 18-35 in South Africa, Zambia, Zimbabwe, Malawi  
and Mozambique. Results 2021

# Cure: learn from cancer field

- **Child with HIV maintains remission without ART for Over 8 Years:**

diagnosed with HIV when at 31 days old → medication for 40 weeks → no meds since: no HIV

- Rare but gives hope for cure
- **ICISTEM patients** : bonemarrow transplantation, no HIV found in reservoirs. But still on medication.
- **VRC01** promoting antibody for 'functional' cure did not prevent viral rebound. (but still tested for prevention)
- **Use cancer drugs** to target reservoir

## **Challenges:**

- Sterilizing cure versus functional cure
- Finding the reservoir
- Future treatment similar to cancer treatment and to ART: combination therapy



# Concerns

- HIV drug resistance:

WHO report: "*HIV drug resistance report 2017* "

- Access to medicine for all

<https://www.youtube.com/watch?v=aI4BZ8b4iDc&feature=youtu.be>

46'50-50'12

# Weblinks

## U=U statement

- <http://www.aidsmap.com/page/3159177/>
- <http://www.aidsmap.com/More-confidence-on-zero-risk-still-no-transmissions-seen-from-people-with-an-undetectable-viral-load-in-PARTNER-study/page/3072326/>
- <https://aidsfonds.nl/nieuws/aidsfonds-soa-aids-nederland-onderschrijft-uu>
- <https://www.preventionaccess.org/consensus>

## Treatment:

<https://aidsfonds.nl/nieuws/langwerkende-maandelijkse-hiv-remmers-weer-een-stap-dichterbij>

<http://www.sciencedirect.com/science/article/pii/S0140673617319177>

<http://www.aidsmap.com/Boosted-darunavir-plus-lamivudine-matches-three-drug-regimen/page/3163651/>

<http://www.aidsmap.com/Doravirine-combination-pill-looks-good-for-initial-HIV-treatment/page/3160520/>

## Prevention:

<http://www.aidsmap.com/Long-acting-cabotegravir-injection-shows-promise-for-HIV-prevention/page/3160501/>

<http://www.empr.com/ias-2017/dapivirine-vaginal-ring-hiv-adolescents-aspire-reach/article/677548/?webSyncID=b41ea2a3-6c5e-7398-6702-486cb4bc6674&sessionGUID=e9cbb455-7a2c-6191-c263-86b592772098&spMailingID=17783084&spUserID=MTg2MzM1MDY2NTU1S0&spJobID=1080131621&spReportId=MTA4MDEzMTYyMQS>

## Vaccin and Cure:

<http://www.empr.com/ias-2017/hiv-remission-antiretroviral-therapy-art-9-year-old-boy/article/677431/>

Vaccin trial <http://www.aidsmap.com/page/3159767/>

<http://www.aidsmap.com/Why-curing-HIV-may-be-like-curing-cancer-and-may-be-as-difficult/page/3162831/>

<http://www.aidsmap.com/VRC01-antibody-can-delay-but-not-prevent-viral-rebound-after-interruption-of-early-treatment/page/3162281/>

<http://www.who.int/mediacentre/news/releases/2017/hiv-drug-resistance/en/>

<http://www.pipeline-report.org/sites/default/files/2017%20Pipeline%20Report%20Final.pdf>

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